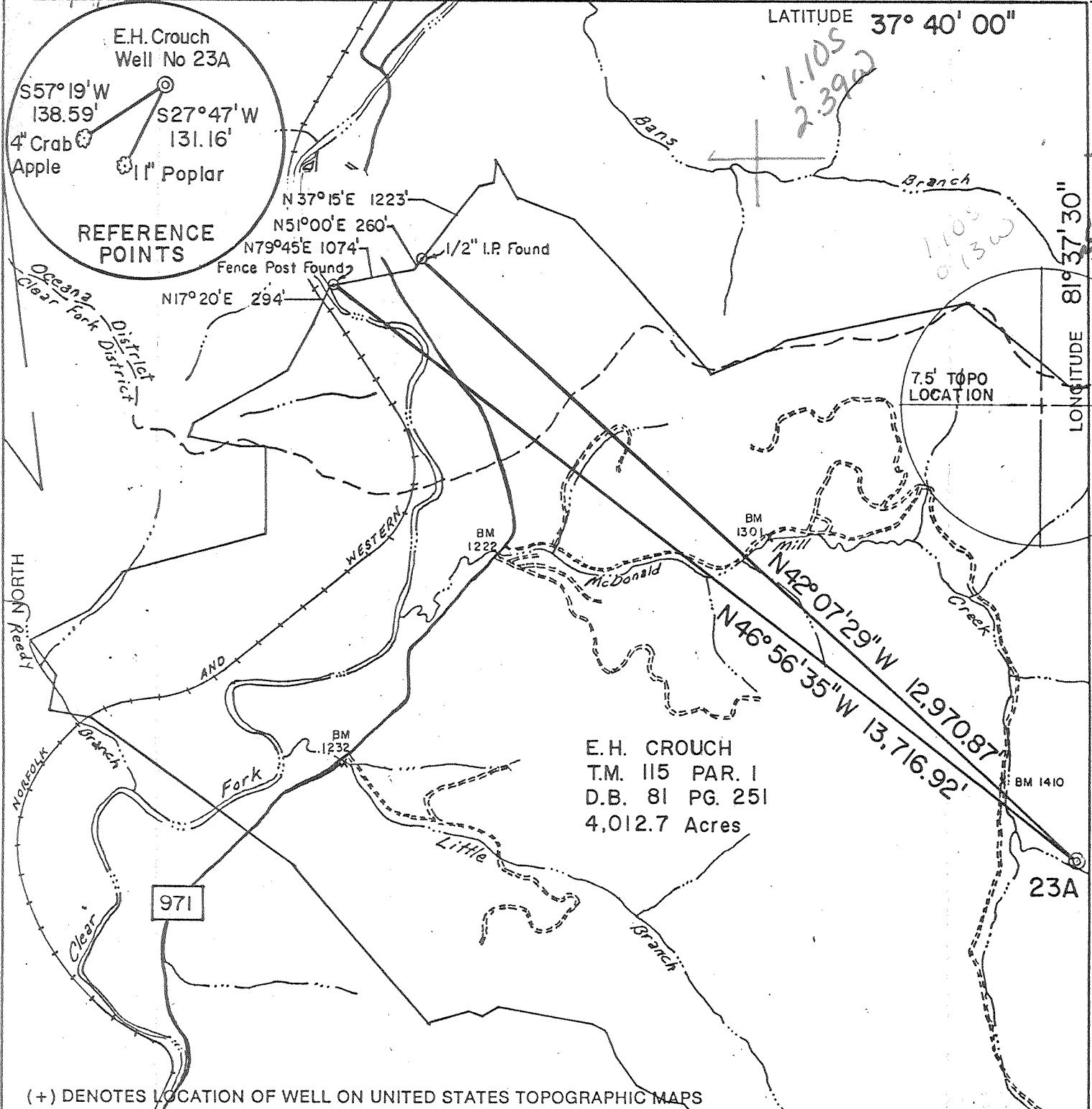


AS 4/11/86



E.H. CROUCH  
 T.M. 115 PAR. 1  
 D.B. 81 PG. 251  
 4,012.7 Acres

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY 1:2500  
 PROVEN SOURCE OF ELEVATION USGS BM on McDonald Mill Creek Elev. 1410

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENERGY.  
 (SIGNED) Gregory Bailey R.P.E. 9318  
 AE ASSOCIATES, Ltd. ENERGY GROUP  
 1227 Leone Lane Dunbar, W.V. 25064 (304) 768-3099

PLACE SEAL HERE

**STATE OF WEST VIRGINIA**  
 DEPARTMENT OF ENERGY  
 OIL AND GAS DIVISION

DATE MARCH 17, 19 86  
 OPERATOR'S WELL NO. E.H. CROUCH No. 23A  
 API WELL NO. \_\_\_\_\_

WELL TYPE: OIL \_\_\_\_\_ GAS X LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF "GAS,") PRODUCTION X STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW X

LOCATION: ELEVATION 1465 WATERSHED MCDONALD MILL CREEK  
 DISTRICT CLEAR FORK COUNTY WYOMING  
 QUADRANGLE OCEANA 518 106 85

SURFACE OWNER E.H. CROUCH ACREAGE 4,012.7  
 OIL & GAS ROYALTY OWNER E.H. CROUCH HRS. \_\_\_\_\_ LEASE ACREAGE 4,012.7  
 LEASE NO. 129/100

PROPOSED WORK: DRILL X CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION \_\_\_\_\_ PERFORATE NEW FORMATION \_\_\_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUG AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUG \_\_\_\_\_

TARGET FORMATION DEVONIAN SHALE ESTIMATED DEPTH 5970  
 WELL OPERATOR PEAKE OPERATING COMPANY DESIGNATED AGENT TIMOTHY K. WILCOX  
 ADDRESS 423 CHARLESTON NATIONAL PLAZA ADDRESS 423 CHARLESTON NATIONAL PLAZA  
 CHARLESTON, WV 25301 CHARLESTON, WV 25301

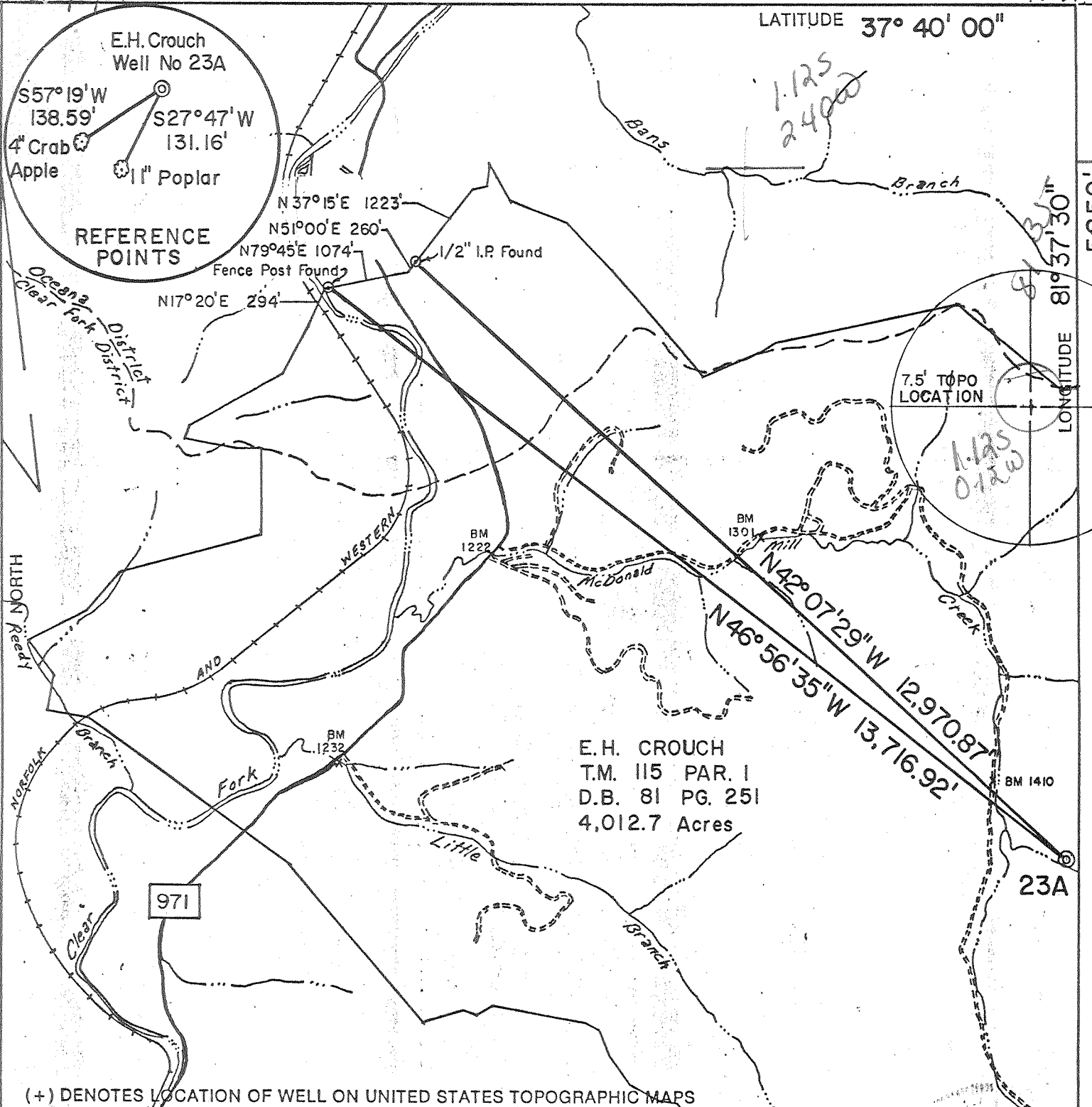
APR 27 1987

-DEEP WELL- -OWWO- 6-6 Baileysville (272)

4/11/86

CODE \_\_\_\_\_ CARD \_\_\_\_\_ PLOT \_\_\_\_\_

650'



LATITUDE 37° 40' 00"

LONGITUDE 81° 37' 30"

5850'

7.5' TOPO LOCATION

E. H. CROUCH  
 T.M. 115 PAR. 1  
 D.B. 81 PG. 251  
 4,012.7 Acres

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY 1:2500  
 PROVEN SOURCE OF ELEVATION USGS BM on McDonald  
 Mill Creek Elev. 1410

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENERGY.  
 (SIGNED) Gregory Bailey R.P.E. 9318  
 AE ASSOCIATES, Ltd. ENERGY GROUP  
 1227 Leone Lane Dunbar, W.V. 25064 (304) 768-3099

PLACE SEAL HERE

STATE OF WEST VIRGINIA  
 DEPARTMENT OF ENERGY  
 OIL AND GAS DIVISION



DATE MARCH 17, 19 86  
 OPERATOR'S WELL NO. E.H. CROUCH No. 23A  
 API WELL NO. 47-109-0991  
 STATE COUNTY PERMIT

WELL TYPE: OIL \_\_\_\_\_ GAS X LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF "GAS,") PRODUCTION X STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW X  
 LOCATION: ELEVATION 1465 WATER SHED MCDONALD MILL CREEK  
 DISTRICT CLEAR FORK 4 COUNTY WYOMING  
 QUADRANGLE OCEANA 518 106 05 Pineville  
 SURFACE OWNER E.H. CROUCH ACREAGE 4,012.7  
 OIL & GAS ROYALTY OWNER E.H. CROUCH HRS. \_\_\_\_\_ LEASE ACREAGE 4,012.7  
 LEASE NO. 129/100  
 PROPOSED WORK: DRILL X CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION \_\_\_\_\_ PERFORATE NEW FORMATION \_\_\_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

COUNTY NAME PERMIT

PLUG AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUG \_\_\_\_\_  
 TARGET FORMATION DEVONIAN SHALE ESTIMATED DEPTH 5970  
 WELL OPERATOR PEAKE OPERATING COMPANY DESIGNATED AGENT TIMOTHY K. WILCOX  
 ADDRESS 423 CHARLESTON NATIONAL PLAZA CHARLESTON, WV 25301  
 ADDRESS 423 CHARLESTON NATIONAL PLAZA CHARLESTON, WV 25301

APR 28 1986

DEEP 10911 3-3 669 Pineville 200) DDD-Dev. shale



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NOV 06 1986

DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

State of West Virginia  
DEPARTMENT OF ENERGY  
Oil and Gas Division

Date 10/15/86  
Operator's  
Well No. Crouch #23-A  
Farm \_\_\_\_\_  
API No. 47 - 109 - 0991

WELL OPERATOR'S REPORT  
OF  
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil \_\_\_ / Gas X / Liquid Injection \_\_\_ / Waste Disposal \_\_\_ /  
(If "Gas," Production X / Underground Storage \_\_\_ / Deep \_\_\_ / Shallow X /)

LOCATION: Elevation: 1465' Watershed Mill Branch of Clear Fork  
District: Clear Fork County Wyoming Quadrangle Oceana 7.5

COMPANY Peake Operating Company  
ADDRESS 423 Charleston National Plaza  
Charleston, WV 25301  
DESIGNATED AGENT Timothy K. Wilcox  
ADDRESS Same  
SURFACE OWNER E. H. Crouch Heirs  
ADDRESS General Delivery, Oceana, WV  
MINERAL RIGHTS OWNER Same  
ADDRESS \_\_\_\_\_  
OIL AND GAS INSPECTOR FOR THIS WORK Arthur  
St. Clair ADDRESS Brenton, WV  
PERMIT ISSUED 4/23/86  
DRILLING COMMENCED 6/10/86  
DRILLING COMPLETED 6/22/86  
IF APPLICABLE: PLUGGING OF DRY HOLE ON  
CONTINUOUS PROGRESSION FROM DRILLING OR  
REWORKING. VERBAL PERMISSION OBTAINED  
ON \_\_\_\_\_

Casing Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"	21	21	2 sks
9 5/8	408	408	140 sks
8 5/8			
7	1347	1347	150 sks
5 1/2			
4 1/2		6027	213 sks. 90 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shales Depth 3550 feet  
Depth of completed well 6045' feet Rotary X / Cable Tools \_\_\_\_\_  
Water strata depth: Fresh None feet; Salt None feet  
Coal seam depths: 170 430 Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Devonian Shales Pay zone depth 4130-4728 feet  
Gas: Initial open flow 10 Mcf/d Oil: Initial open flow --- Bbl/d  
Final open flow (73) Mcf/d Final open flow --- Bbl/d  
Time of open flow between initial and final tests 7 hours  
Static rock pressure 480 psig (surface measurement) after 64 hours shut in  
(If applicable due to multiple completion--)  
Second producing formation \_\_\_\_\_ Pay zone depth \_\_\_\_\_ feet  
Gas: Initial open flow \_\_\_\_\_ Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow \_\_\_\_\_ Mcf/d Oil: Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ hours  
Static rock pressure \_\_\_\_\_ psig (surface measurement) after \_\_\_\_\_ hours shut in

(Continue on reverse side)

NOV 17 1986

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

9/15/86 - Dowell dumped 1000 gal. 7% acid. McCullough perforated the Devonian Shale at 5055', 5100', 5125', 5162', 5209', 5459', 5539', 5572', 5604', 5611', 5628', 5647', 5658', 5660', 5672'.

Dowell fraced using 75 Q Foam, 60,000# 20/50 sand, 263 bbl. total fluid, 816,000 SCFN<sub>2</sub>. ATR - 44 bbl/min. down hole, BDP 2300#, ATP 3000#, ISIP 1800#, after 15 min. SIP 1600'.

McCullough perforated top zone in Devonian Shale at 4130', 4414', 4424', 4448', 4452', 4507', 4540', 4620', 4661', 4663', 4665', 4697', 4715', 4728'. Set N-1 frac plug at 4770'.

Dowell fraced using 75 Q Foam, 1000 gal. 7% acid, 15,000# 80/100 sand, 45,000# 20/50 sand, 548,000 SCFN<sub>2</sub>, 208 bbl. total fluid. ATR - 28 bbl/min. (down hole), BDP 2300#, ATP 1950#, ISIP 1400#, 15 min. SIP 1350#.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Sand & Shale			0	1350	
Shale			1350	1448	
Sand			1448	1520	
Shale			1520	1560	
Sand & Shale			1560	1610	Gas checks:
Ravencliff Sand			1610	1650	1525 - .085
Avis Lime			1650	1690	1600 - .158
Shale			1690	1720	1677 - .163
Sand			1720	1790	2200 - .146
Shale			1790	2010	2350 - .094
Sand			2010	2090	2500 - .083
Shale & Sand			2090	2273	2650 - .100
Sand			2273	2310	2900 - .084
Shale			2310	2365	3450 - .103
Lime			2365	2450	3525 - .103
Shale			2450	2490	3680 - .103
Big Lime			2490	2870	4660 - .082
Shale			2870	3010	5150 - .088
Sand & Shale			3010	3118	5575 - .087
Shale			3118	3472	TD - .103
Berea Sand			3472	3504	
Shale			3504	3640	
Shaly Sand			3640	3657	
Shale			3657	6020	
Onondaga Lime			6020	TD	

6045  
3504  
2541 - expl. log.

DTD - 6045  
LTD - 6045

(Attach separate sheets as necessary)

Peake Operating Company  
Well Operator

By:

Date:

*J. Weebley*  
10-15-86

Note: Regulation 2.02(i) provides as follows:  
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."



Date June 2, 1987  
 Operator's Well No. Crouch #23-A  
 Farm Crouch  
 API No. 47 - 109 - 0991 - Revised Frac.

**RECEIVED**  
 JUN 03 1987

State of West Virginia  
 DEPARTMENT OF ENERGY  
 Oil and Gas Division

DIVISION OF OIL & GAS  
 DEPARTMENT OF ENERGY

WELL OPERATOR'S REPORT  
 OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil    / Gas X / Liquid Injection    / Waste Disposal    /  
 (If "Gas," Production X / Underground Storage    / Deep    / Shallow X /)

LOCATION: Elevation: 1465' Watershed Mill Branch of Clear Fork  
 District: Clear Fork County Wyoming Quadrangle Oceana 7.5

COMPANY Peake Operating Company  
 ADDRESS 423 Charleston National Plaza  
Charleston, WV 25301  
 DESIGNATED AGENT Timothy K. Wilcox  
 ADDRESS Same  
 SURFACE OWNER E. H. Crouch Heirs  
 ADDRESS General Delivery, Oceana, WV  
 MINERAL RIGHTS OWNER Same  
 ADDRESS     
 OIL AND GAS INSPECTOR FOR THIS WORK Arthur  
Est. Clair ADDRESS Brenton, WV  
 PERMIT ISSUED 4/23/86 / 4-24-87  
 DRILLING COMMENCED 6/10/86 / 5-19-87  
 DRILLING COMPLETED 6/22/86 / 5-26-87  
 IF APPLICABLE: PLUGGING OF DRY HOLE ON  
 CONTINUOUS PROGRESSION FROM DRILLING OR  
 REWORKING. VERBAL PERMISSION OBTAINED  
 ON   

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. Ft.
Size 20-16 Cond.			
13-10"	21	21	2 sks.
9 5/8	408	408	140 sks.
8 5/8			
7	1347	1347	150 sks.
5 1/2			
4 1/2		6027	213 sks. 90 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shales Depth 3,500 feet  
 Depth of completed well 6045 feet Rotary X / Cable Tools     
 Water strata depth: Fresh None feet; Salt None feet  
 Coal seam depths: 170, 430 Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Princeton Pay zone depth 1480-1495 feet  
 Gas: Initial open flow 84 Mcf/d Oil: Initial open flow    Bbl/d  
 Final open flow 1,283 Mcf/d Final open flow    Bbl/d

Time of open flow between initial and final tests 4 hours

Static rock pressure 440 psig (surface measurement) after 72 hours shut in  
 (If applicable due to multiple completion--)

Second producing formation    Pay zone depth    feet  
 Gas: Initial open flow    Mcf/d Oil: Initial open flow    Bbl/d  
 Final open flow    Mcf/d Oil: Final open flow    Bbl/d

Time of open flow between initial and final tests    hours

Static rock pressure    psig (surface measurement) after    hours shut in

(Continue on reverse side)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

- 5/19/87 - Isolate Devonian Shales with a Baker Model T Bridge plug at 1690'. Perforate 3 squeeze holes at 1550'. Squeeze with 8 bbls. RFC.
- 5/21/87 - Drilled cement to ±1516'. Perforate 1480-1495 with 32 holes.
- 5/26/87 - 75 Q Foam Frac Princeton. Used 500 gal. 15% HCL, 60,000# 20/50, 215 bbls. H<sub>2</sub>O, 420,000 SCFN<sub>2</sub>, BDP 2850#, ATP 2450#, ISIP 2050#, after 15 min. 1875#.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Sand & Shale			0	1350	
Shale			1350	1448	
Sand			1448	1520	
Shale			1520	1560	
Sand & Shale			1560	1610	Gas checks:
Ravencliff Sand			1610	1650	1525 - .085
Avis Lime			1650	1690	1600 - .158
Shale			1690	1720	1677 - .163
Sand			1720	1790	2200 - .146
Shale			1790	2010	2350 - .094
Sand			2010	2090	2500 - .083
Shale & Sand			2090	2273	2650 - .100
Sand			2273	2310	2900 - .084
Shale			2310	2365	3450 - .103
Lime			2365	2450	3525 - .103
Shale			2450	2490	3630 - .103
Big Lime			2490	2870	4660 - .082
Shale			2870	3010	5150 - .088
Sand & Shale			3010	3118	5575 - .087
Shale			3118	3472	TD - .103
Berea Sand			3472	3504	
Shale			3504	3640	
Shaly Sand			3640	3657	
Shale			3657	6020	
Onondaga Lime			6020	TD	

DTD - 6045  
LTD - 6045

**RECEIVED**  
JUN 03 1987

DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

(Attach separate sheets as necessary)

PEAKE OPERATING COMPANY

Well Operator

By:

Date:

*[Signature]*  
6-2-87

Note: Regulation 2.02(i) provides as follows:  
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."

**RECEIVED**  
APR - 7 1986



1) Date: April 2, 1986  
2) Operator's Well No. Crouch #23-A  
3) API Well No. 47-109-0991  
State \_\_\_\_\_ County \_\_\_\_\_ Permit \_\_\_\_\_

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY, OIL AND GAS DIVISION  
APPLICATION FOR A WELL WORK PERMIT

- 4) WELL TYPE: A Oil \_\_\_\_\_ / Gas X /  
B (If "Gas", Production \_\_\_\_\_ / Underground storage \_\_\_\_\_ / Deep \_\_\_\_\_ / Shallow X /)
- 5) LOCATION: Elevation: 1465 Watershed: Mill Creek of Clear Fork  
District: Clear Fork 669 County: Wyoming Quadrangle: Oceana 7.5
- 6) WELL OPERATOR Peake Operating Co CODE: 37100 7) DESIGNATED AGENT Timothy K. Wilcox  
Address 423 Charleston National Plaza Address 423 Charleston National Plaza  
Charleston, WV 25301 Charleston, WV 25301
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Arthur St. Clair  
Address P. O. Box 157  
Brenton, WV 24818
- 9) DRILLING CONTRACTOR: Name Unknown  
Address \_\_\_\_\_
- 10) PROPOSED WELL WORK: Drill X / Drill deeper \_\_\_\_\_ / Redrill \_\_\_\_\_ / Stimulate X /  
Plug off old formation \_\_\_\_\_ / Perforate new formation \_\_\_\_\_  
Other physical change in well (specify) \_\_\_\_\_
- 11) GEOLOGICAL TARGET FORMATION, Devonian Shale 441
- 12) Estimated depth of completed well, 5980 feet  
13) Approximate trata depths: Fresh, 150 feet; salt, 500 feet.  
14) Approximate coal seam depths: None Is coal being mined in the area? Yes \_\_\_\_\_ / No X

15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well		
Conductor	12 3/4	H-40	42	X		30	30		Kinds
Fresh water	9 5/8	H-40	36	X		350	350	CTS Neat	
Coal									Sizes
Intermediate	7	J-55	17	X		1300	1300	150 sacks	Rule 15.01
Production	4 1/2	J-55	10.5	X			5900	300 sacks as req.	by rule 15.01
Tubing									
Lin...									Perforations:
									Top Bottom

OFFICE USE ONLY  
DRILLING PERMIT

Permit number 47-109-0991 Date April 23 1986

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector. (Refer to No. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the reverse hereof.  
Permit expires April 23, 1988 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>✓</u>	Agent: <u>ALB</u>	Plat: <u>AS</u>	Casing: <u>AS</u>	Fee: <u>5353</u>	WPCP: <u>AS</u>	S&E: <u>AS</u>	Other: _____
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NOTE: Keep one copy of this permit posted at the drilling location.

John H. Johnston by Margaret J. Hase  
Director, Division of Oil and Gas File





1) Date: March 31, 1987  
 2) Operator's Well No. Crouch #23-A  
 3) API Well No. 47 - 109 - 0991 - Frac.  
 State County Permit

**RECEIVED**  
APR 02 1987

STATE OF WEST VIRGINIA  
 DIVISION OF OIL & GAS DEPARTMENT OF ENERGY, OIL AND GAS DIVISION  
 DEPARTMENT OF ENERGY  
**APPLICATION FOR A WELL WORK PERMIT**

- 4) WELL TYPE: A Oil  / Gas  /  
 B (If "Gas", Production  / Underground storage  / Deep  / Shallow  /)
- 5) LOCATION: Elevation: 1465' Watershed: Mill Creek of Clear Fork  
 District: Clear Fork 4 County: Wyoming 109 Quadrangle: Oceana 7.5 517
- 6) WELL OPERATOR Peake Operating Co CODE: 37100 7) DESIGNATED AGENT Timothy K. Wilcox  
 Address 423 Charleston National Plaza Address 423 Charleston National Plaza  
Charleston, WV 25301 Charleston, WV 25301
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Arthur St. Clair  
 Address P. O. Box 157  
Brenton, WV 24818
- 9) DRILLING CONTRACTOR: Name Unknown  
 Address \_\_\_\_\_
- 10) PROPOSED WELL WORK: Drill  / Drill deeper  / Redrill  / Stimulate  /  
 Plug off old formation  / Perforate new formation  /  
 Other physical change in well (specify) \_\_\_\_\_
- 11) GEOLOGICAL TARGET FORMATION, Devonian RAVEN CLIFF
- 12) Estimated depth of completed well, 5900 / 1610 feet
- 13) Approximate strata depths: Fresh, 150 feet; salt, 500 feet.
- 14) Approximate coal seam depths: None Is coal being mined in the area? Yes  / No  /

15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS	
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well		Kinds	Sizes
Conductor	12-3/4	H-40	42	X		30	30			Kinds
Fresh water	9-5/8	H-40	36	X		350	350	CTS Neat		
Coal										
Intermediate	7	J-55	17	X		1300	1300	150 sks. Rule 15.01		Rule 15.01
Production	4-1/2	J-55	10.5	X			5900	Rule 15.01		Rule 15.01
Tubing										
Links										Perforations:
										Top Bottom

OFFICE USE ONLY  
 DRILLING PERMIT

Permit number 47-109-0991-Frac.

April 24 19 87  
 Date

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector. (Refer to No. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the reverse hereof.

Permit expires April 24, 1989 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <input checked="" type="checkbox"/>	Agent: <input checked="" type="checkbox"/>	Plat: <input checked="" type="checkbox"/>	Casing: <input checked="" type="checkbox"/>	Fee: <u>6255</u> <u>191</u>	WPCP: <input checked="" type="checkbox"/>	S&E: <input checked="" type="checkbox"/>	Other: <input type="checkbox"/>
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NOTE: Keep one copy of this permit posted at the drilling location.

[Signature]  
 Director, Division of Oil and Gas

File

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.